

Surface Mount Bandpass Filter

SXBP-69+

50Ω 61.9 to 76.5 MHz

The Big Deal

- Narrow bandwidth
- High Rejection
- Good VSWR
- Miniature shielded package



CASE STYLE: HF1139

Product Overview

SXBP-69+ is a 50Ω bandpass filter in a shielded package fabricated using SMT technology. This bandpass filter covers from 61.9 to 76.5 MHz. This filter build with high Q capacitors and wire welded inductors for high reliability. This filter has a narrow bandwidth and sharper cut-off and pass the IF frequencies.

Key Features

Feature	Advantages
Low insertion loss	Can be used in telecommunication and broadband wireless application.
Good rejection	This enables the filter attenuate spurious signals and reject harmonics for broad frequency band
Shielded package	The small surface mount package enables the SXBP-69+ to used in compact design

Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp



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Features

- Narrow bandwidth
- Sharper roll off
- Miniature shielded package

Applications

- Telecommunication and broadband wireless
- Harmonic rejection
- IF signal processing

Electrical Specifications at 25°C

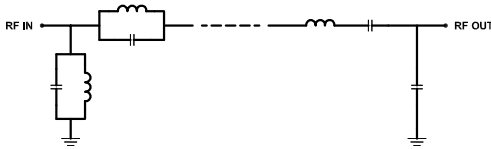
Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Center Frequency	—	—	69	—	MHz	
	Insertion Loss	F1-F2	61.9-76.5	—	1.90	3.50	dB
	VSWR	F1-F2	61.9-76.5	—	1.57	2.10	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC-55	20	26	—	dB
	VSWR	DC-F3	DC-55	—	20	—	:1
Stop Band, Upper	Insertion Loss	F4-F5	87-3200	20	27	—	dB
	VSWR	F4-F5	87-3200	—	20	—	:1

Maximum Ratings

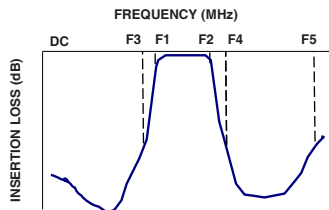
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W

Permanent damage may occur if any of these limits are exceeded.

Functional Schematic



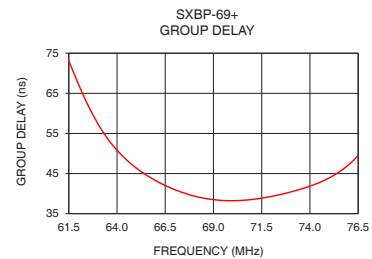
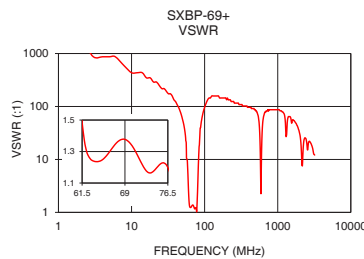
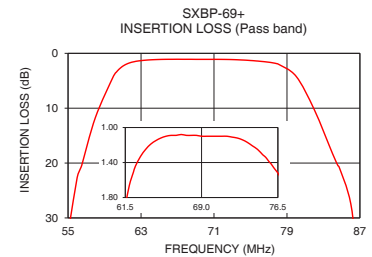
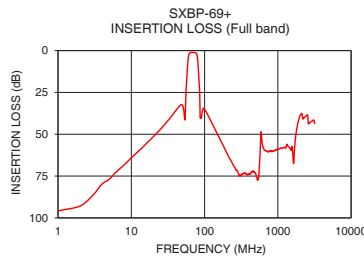
Typical Frequency Response



Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1.0	95.77	1737.18	61.9	68.46
26.0	46.16	217.15	62.5	62.00
55.0	32.07	25.19	63.0	57.47
55.2	30.71	22.65	64.0	50.81
56.4	20.85	11.82	65.0	46.38
58.0	11.69	9.43	66.0	43.26
60.5	3.05	2.18	67.0	40.98
61.9	1.66	1.37	68.0	39.39
69.0	1.10	1.38	69.0	38.51
76.5	1.52	1.20	70.0	38.23
80.0	4.18	2.45	71.0	38.54
82.0	10.28	7.60	72.0	39.31
84.6	20.51	18.44	72.5	39.81
86.0	27.43	28.49	73.0	40.41
87.0	40.33	39.32	73.5	41.07
300.0	75.10	108.58	74.0	41.87
595.0	49.70	5.30	74.5	42.78
1650.0	67.38	54.29	75.0	43.91
2150.0	38.23	7.76	75.5	45.35
3200.0	43.44	12.09	76.5	49.48

+RoHS Compliant
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications



Notes

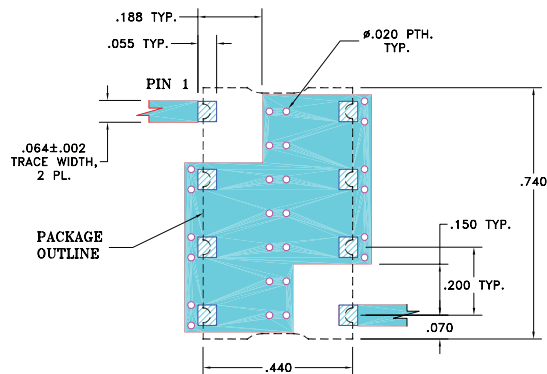
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Pad Connections

INPUT	1
OUTPUT	8
GROUND	2,3,4,5,6,7

Demo Board MCL P/N: TB-368 Suggested PCB Layout (PL-230)

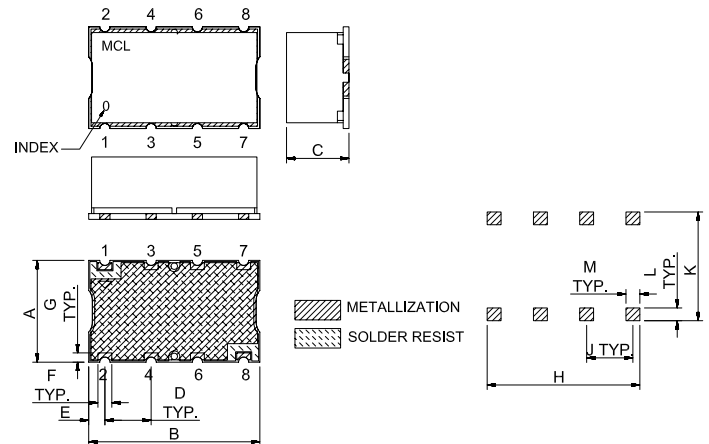


NOTE:

- TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS: .025" ± .002". COPPER: 1/2 OZ. EACH SIDE.
FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
- BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Outline Drawing



Outline Dimensions (inch)

A	B	C	D	E	F	G
.44	.74	.27	.200	.07	.060	.040
11.18	18.80	6.86	5.08	1.78	1.52	1.02
H	J	K	L	M	wt	
.660	.200	.470	.055	.060	grams	
16.76	5.08	11.94	1.40	1.52	3.0	

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